

program memory, and a ~~battery of one or more~~
applications in a memory of the chip card, ~~wherein t.~~

The device comprises:

_____ a register of the microprocessor to store a
5 code, on several check bits, proper to an entity
brought into play,

_____ . Also included are a call instruction, and
an instruction for the return of the set of
instructions to instantaneously and automatically
10 update the register during the action by a new entity,

_____ . The device further includes a checking
device for ~~the~~ checking, as a function of the check
bits, ~~of the authorized character of the~~ whether access
to the zones or address location of the memory of the
15 chip card by the new entity that is called or comes
into action in the chip card,

_____ a is authorized. A first link ~~to~~ transmits
the check bits from the microprocessor to the checking
device.

20 _____ According to a particular embodiment of the
device of the invention, each new entity ~~taking~~
~~action~~ being executed is activated at a predefined
address of a ~~ROM (read-only~~ read only memory (ROM) ~~-type~~
~~memory~~ of the chip card.

25 _____ According to different embodiments of the
invention, the entity ~~working~~ operating in the chip card
may be an application of the ~~battery of one or more~~
applications or a hardware event, or ~~again~~ the
operating system associated with the microprocessor of
30 the chip card.

BRIEF DESCRIPTION OF THE DRAWINGS

Brief Description of the Drawings

The various aspects and advantages of the
invention shall appear more clearly hereinafter in the
35 following description made with reference to the

appended figures which are given purely by way of an indication and in no way restrict the scope of the invention, and which are now introduced:

—~~Figure~~FIG. 1, ~~already described~~, is a
5 simplified ~~view~~block diagram of a software architecture
~~offor~~ the chip card projectscards currently being
developed, according to the prior art; and

—Figure 2 is a ~~depiction of~~block diagram
illustrating the principle of operation ~~according to~~
10 ~~the invention duringfor~~ the execution of an application
within ~~thea~~ chip card.

—In Figure 2, a according to the present
invention. A microprocessor 200 ~~of a chip card 100~~
manages the set of operations ~~offor~~ a batteryplurality
15 of applications 210 of the chip card 100.

MORE DETAILED DESCRIPTION

Detailed Description of the Preferred Embodiments

A two-way bus 250 exchanges information
between the microprocessor 200 and any application of
20 the batteryplurality of applications ~~210~~210-212. The
information exchanged may be data elements, addresses
or control instructions. ~~AAn access controller of~~
~~access~~ to the memory 220 exchanges information with the
microprocessor 200, ~~especially by means of using~~ a link
25 230, which conveys ~~a signal, called~~ a control signal
between the microprocessor 200 and the controller
providing access to the memory 220.

~~For example, w~~When an entity such as the
application 211, ~~by means of a two-way bus 250for~~
30 example, requires the intervention of another entity,
such as an application 212, it sends a call instruction
DCALL using the two-way bus 250 followed by a
designation of the entity called and a parameter
enabling the nature of the call to be determined.
35 According to the invention, a register R is updated

during such calls. A certain number of bits of the register R then assume a value associated with the called entity. The register R is therefore a hardware ~~means~~component of the microprocessor 200 used to store
5 a code proper to the entity of the software architecture that is being performed, and to control its field of execution.

Furthermore, the device according to the invention may also take into account ~~of~~ instructions
10 known as hardware instructions, ~~for example~~such as resetting type instructions ~~of the resetting type, for example.~~ Instructions known as hardware instructions are events that may occur in real time ~~on a chip card~~ and generate interruptions in the microprocessors of
15 the chip cards. This type of event is managed by the device ~~according to the invention~~ in the same way as the software instructions. ~~The~~The bits of the register R take a very precise value, appropriate to each real-time event ~~that acts on~~affecting the chip cards, thus
20 limiting and controlling the rights pertaining to these events.

The information given by the register R is thus capable of checking ~~a piece of information, for example at the microprocessor or any other entity~~
25 ~~external to the software architecture,~~ on the identification of the zone of the software architecture concerned by the application being executed. This information is checked at the microprocessor or at any other entity external to the software architecture.

30 The information given by the register R enables the checking of the zone of the memory of the chip card in which the application is ~~entitled to come into action, namely the memory space that it is~~ permitted to be accessed. Thus, any user attempting to
35 make fraudulent use of the operating system in order to